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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers and improve the character of the service rendered to the public.

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LIGHT THE WATERWAYS.

The Committee on interstate and foreign commerce to whom was referred the Brinkner omnibus light-house bill now pending in Congress appears to have thoroughly grasped the inclusive reasons for the required aids to navigation as also the duty of the nation toward facilitating transportation and commerce.

It gives us great pleasure to quote from the closing remarks of the committee as follows.

"Your committee desires to add that you have appropriated largely and, doubtless, wisely to the improvement of rivers and harbors and to the consequent facilitation of commerce. It would be a curious concomitant of this state of facts if, while you are deepening the channels of your water ways and rendering not only possible but probable a vast increase in the tonnage and number of the vehicles of interstate and foreign transportation, you should refuse to life and property thus encouraged to venture to the requisite means of safe conveyance or remit them to the dangerous and unreliable protection, in not a few cases, of lights and signals established by private enterprise and kept up at private expense.

We have no right to make the people take a leap in the dark, run the chances of the tortuous channel, and brave the hazards of the aggressive shoal with their eyes closed. We must not lead them into the wilderness of the waters and leave them without a pathway marked either backward or forward. We should not deepen the depths without making provision against falling into them. But whether you spend for rivers and harbors or not, it is absolutely necessary to light the ways of commerce by other means than those which nature provides in the great interest of the salvation of life and property. On behalf of such measure of justice as is just now attainable to the toilers of the sea this bill should pass Congress, and greater sums must be spent hereafter. Meantime your committee claim to have given careful consideration to the condition of the Treasury.

TO PROTECT OUR COASTING TRADE.

A bill just introduced in the Senate by Senator Frye, amending the existing laws relative to the transportation of merchandise from one American port to another by foreign vessels, shows to what extent foreign vessels, chiefly British, endeavor to wriggle out of the letter and spirit of our coasting laws. The Frye bill is aimed to prevent vessels from abroad from loading goods in American ports, transporting them to a foreign port, and then bringing them again to the United States, in discrimination against our coastwise trade. The bill, as favorably reported on Dec. 15 from the Commerce Committee by Senator Frye, prevents the transportation of merchandise in any foreign vessel from one United States port to another, via. any foreign port. Under the present laws it frequently happens that tramp and other foreign steamers load in one American port, carry the load to Europe, and, after taking aboard foreign merchandise, return to another port here where both cargoes are discharged.

ST. MARY'S FALLS CANAL TRAFFIC.

The following statistical information, showing the results obtained from a discussion of the business through the St. Mary's Falls Canal during the season of 1891, is kindly furnished this office by General Superintendent E. S. Wheeler:

SEASON OF 1891.

Total miles tons	7,292,462,269
Total cost of transportation	$9,849,023
Average distance freight was carried	820 4-10m
Total registered craft using canal during season	652
Total registered tonnage of same	495,108
Average registered tonnage of same	759
Total estimated value of same	$34,066,800
Average value of same	52,250

Season.	Actual Freight. (Tons of 2,000 lbs.) East Bound.	Actual Freight. (Tons of 2,000 lbs.) West Bound.	Valuation of Freight Tonage.	Average Value Per Ton.
1881	965,236	445,111	$ 28,965,612	$18.47
1882	1,338,027	691,494	31,238,153	15.39
1883	1,277,283	989,822	39,730,663	17.53
1884	1,909,290	965,267	51,905,786	18.06
1885	2,135,066	1,121,562	53,413,472	16.40
1886	3,179,943	1,347,816	69,080,071	15.26
1887	3,749,446	1,745,203	79,031,757	14.38
1888	3,923,344	2,488,079	82,156,019	12.81
1889	5,552,641	1,933,381	83,732,527	11.14
1890	6,428,838	2,612,375	102,214,948	11.31
1891	5,969,691	2,919,068	128,178,208	14.42

The west-bound freight since June 9th, 1881, (the date on which the U. S. Government assumed control) is 32 per cent, of the total or very nearly one-half as much as the east-bound freight.

The valuation of freight for each year is based on the unit values used in 1885.

	Total cost of carrying freight.	Cost of carrying per mile. ton.
1887	$10,075,153	2.3 mills
1888	7,883,077	1.5 mills
1889	8,634,247	1.5 mills
1890	9,472,215	1.3 mills
1891	9,849,023	1.35-100 mills

	Value of American craft.	Value of Canadian craft.	Total value.
1887	$17,684,550	$2,089,400	$19,773,950
1888	20,381,100	1,514,300	21,895,400
1889	25,328 600	1,597,600	26,926,200
1890	27,857,700	1,777,800	29,635,500
1891	31,947,300	2,119,500	34,066,800

Proportion of freight tonnage carried by Canadian vessels: 1887, 7 per cent; 1888, 6 per cent; 1889, 4 per cent; 1890, 3½ per cent; 1891, 4 per cent.

Canal was open to navigation during season of 1891, 225 days; during 1892, 233 days.

A patent has been issued in London for a glazed mask to protect the eyes of look-out men and ship's officers on watch during driving rain, hail or snow. The mask is virtually a flexble extension of the "sou'-wester," having small glass windows.

THE NIAGARA SHIP CANAL.

The Oswego board of trade has issued the following circular over the signature of its president, Robert G. Post:

"The time has come for a united effort to secure an American Niagara Falls ship canal. To that end a convention of delegates from all parts of the country will meet in Washington next month to give voice to the will of the people on this great national work. It is confidentially predicted that the present Congress will pass the Bentley bill, which provides for surveys of the Niagara ship canal routes and also of the various proposed lines from Lake Ontario to the Hudson, thus to complete the great twenty-one foot waterway from Duluth to the ocean."

The object of the board of trade in sending out this circular letter is to advise its members of the situation; to call their attention to the fact that the President, in his recent message to Congress, recommends the building of the Niagara ship canal as a national necessity; that the great west is thoroughly aroused to the importance of the project, and that New York has at last come to realize the fact that to save her commerce she must be connected with the west by a deep waterway on American soil. Therefore it is that the board urges a renewal of interest in, and active support of, an organization which, under such circumstances, will be able to effectively aid the completion of a work which will place Oswego at one of the most important points on the national highway from the great west to the Atlantic. The Cleveland board of trade has also taken action on the subject and appointed the well known champion of western waterways Mr. George H. Ely as a delegate to attend the Washington convention.

NEW PUGET SOUND INDUSTRIES.

The British government has had in operation for some years past a large dry dock at Esquimalt, B. C. The next move of maritime importance was the locating of the American Steel Barge Company's plant at Everett, Wash., closely followed by the authority to construct a national dry dock of large dimensions to accommodate vessels of the United States and now it is learned that the Port Townsend Dry Dock Company has on hand one of the largest enterprises undertaken on the Pacific coast. At Port Wilson, the entrance of Admiralty Sound with the Straits of Juan de Fuca, this company is excavating for a proposed dry dock of the following dimensions: 480 feet long, 120 feet wide at surface, 85 feet wide at bottom, and 38 feet in depth, with floating gate 60 feet in length. The Pacific coast develoments in maritime affairs will stand close watching in a national, naval, military and commercial sense. The old world is getting close aboard on our western borders and the New England States may have to look to their laurels in the near future, for it would appear that western commerce and transportation will soon dominate, and instead of via. London and New York, imports will be marked via. Puget Sound for distribution over the United States and on to Liverpool and London. In this connection it may be noted that a transportation company has just been organized that may make matters interesting for the overland roads and the Pacific Mail Steamship Company. It is the North American Navigation, and has $3,000,000 capital. The seven incorporators are among the heaviest shippers and leading merchants of San Francisco, and they will carry on the business of common carriers between the ports of San Francisco, Panama and elsewhere. The incorporated capital is small to start with, but great industries have grown from small beginnings.

NEWS AROUND THE LAKES.

CLEVELAND, O.

Mr. Joseph R. Oldham, marine architect and surveyor, has resigned the lake agency of the American Shipmasters' Association, and is now compiling a classification register for iron and steel lake built ships at the request of several of the most prominent owners. The new book is to be named the "Reliance."

Mr. J. C. Burton, of Detroit, representing the Cincinnati Underwriters Fire and Marine Insurance Company, is spending a few days in the city this week. Mr. Burton represented the Columbia Insurance Company, of New York, in 1864, and is one of the most expert and best known agents on the lakes.

As an indication of the dry-dock and metal shipyard work at this port, it may be stated that there were sixteen steel vessels ready and waiting for damage repairs to be entered upon during this month. This number did not include the extra work which is intended to be put into steel vessels this winter for strengthening purposes, quite a few of which are on the list here.

The effects of the recent Carnegie strike is still felt in the shipyards, and quite a detention is experienced at the yards of the Cleveland Ship Building Co. on account of the slowness at Pittsburg in filling orders for the material required in the construction of the two large freight steamers now building to the order of Mr. M. A. Bradley and Capt. Thomas Wilson, of this port.

Captain Bartlett, the g. m. a. t. w., desires to express his gratitude to the vessel brokers for the Christmas donations received at their hands. Words cannot express his thankfulness to Mr. M. A. Bradley for furnishing him a good winter's home on one of his vessels, and the energetic young-old man is as joyful all round as a two-year-old.

Through a recent business arrangement the well known firm of Bassett, Presley & Train have become the most extensive dealers in manufactured iron in the city. A large stock of iron and steel used in constructive work for vessels and stationary purposes is kept on hand, ready for immediate shipment, and patrons are always assured of prompt business attention and courteous dealings in all the transactions of the firm, domestic or foreign.

Capt. E. Dahlke, of the tug G. R. Worswick, is still to the fore and doing a land office business on the river. He says if he can't run on water he intends to run on ice and keep navigation open for the fire-boat all winter, incidentally, taking charge of winter transportation, moving vessels to and from the dry docks and all other river demands. He is always to be found on deck and is the "stormy petrel" of this port.

The Globe Iron Works Co. will build the battery of Belleville boilers for the two large passenger steamers ordered by J. J. Hill- The two quadruple expansion engines will also be built at the engine shops of the Globe. The only other multiple cylinder engines on the lakes above the triple expansion are those of the W. J. White's yacht Say When, built by Herreschoff. These, I understand, are five cylinder compound and give excellent satisfaction in connection with a Roberts' safety water tube boiler.

At the annual meeting of the local lodge of the Shipmasters' Excelsior Marine Benevolent Association the following officers were elected: Capt. John Lowe, president; Capt. Joseph A. Holmes, first vice-president; Capt. William Cumming, second vice-president; Capt. Thomas Jones, treasurer; Capt. Frank Brown, financial secretary; Capt. W. C. Goodsell, recording secretary. The other officers will be appointed by the president at the next meeting. The annual meeting of the grand lodge will be held at Port Huron early in January.

Plans and models of the new fire boat are now in the hands of fire director, Gardner. The proposed boat is 80 feet long, 22 feet beam, and draws six feet forward and 7 feet aft. The bow of the boat is spoon shaped and is intended to crush ice by sliding over it and breaking through by sheer weight. The boat if adopted, will be supplied with a double set of compound engines and will have a speed of twelve miles, she will also be equipped with electric search lights. Commodore Gardner will endeavor to have the council adopt a plan and authorize him to advertise for bids for the construction of the boat.

A Chicago Capt. Harmon, with his "jack-knife" system of bridging, is urgently required at this port to have moved the present ponderous and unwarrantable obstructions from the middle of the "wide and commodious" Cuyahoga. It looks as if there was no local mechanical ingenuity or scientific skill at hand to propose any alternative for doing away with the stationary obstructions in mid-river carrying the bridges. Each bridge now takes up the room of a 3,000 ton ship sunk in mid-stream and as we have a trifle more land than water these pile-driven jetties should be moved to the banks of the muddy and sinuous creek.

Mr. John F. Pankhurst, vice-president and general manager of the Globe Iron Works Co., contemplates starting on a cruise to the West Indies next week in the handsome steel steam yacht Comanche built for Mr. H. M. Hanna, the president of the company. Mr. Pankhurst has not been enjoying the best of health recently, owing to his close attention to business and the cruise would undoubtedly re-invgorate the unusally enegetic manager, who, in justice to himself is entitled to a long and pleasant vacation, though, in the absence of the president and vice-president of so extensive an industry, Mr. Luther Allen, the secretary and treasurer, would probably find himself snowed under with the pressing demands of business requiring immediate, skilled and technical attention. It is well known that Mr. Allen's business capacity is almost unlimited, but, I believe that before the six weeks had expired, he would be ready to ask for "quarter" or holler peccavi for having even unwillingly accepted the inevitable labor which would necessarily have to be assumed by him in the absence of Mr. Pankhurst.

Several marine engineers have applied for a stationary engineer's licenses and were told that they were not eligible candidates for examination. On Tuesday an engineer who had held a marine engineer's license for over twenty years and has had charge of the engines of some of the largest steamers on the lakes, besides having been a machinist before he became a licensed marine engineer, found that under the construction placed on the stationary engineer's ordinance he could not obtain a license to operate a hoisting machine on the docks. If he attempted to run a two by four engine used to operate a lathe he would be cast into jail. The reason is, under the ruling of the examiner, that the applicant is not entitled to an examination until he has had a year's experience with a stationary engine. The engineer desired a license because he expects to take charge of the triple expansion marine engines at the power house of a street railroad company. He was amazed when he learned of his apparent disqualification and urged that he could not get the necessary year's experience without a license. He was informed that the ruling on that point has been adopted by all the engineers who have been in the service of the city. He was not satisfied, however, and appealed to the director of law for a legal opinion. The director gave him a note to Mr. Whitwell, the Examiner of Engineers, directing him to examine the applicant and issue a license if he passed the examination. It is a peculiar law which requires a man to have a year's experience before he can be examined for a license, and yet he could not get that experience without a license. The Marine Engineers' Beneficial Association ought to petition to have set aside such a burlesque mode of examinations and see that the necessary license is granted to qualified individuals. To right this one wrong alone would be a fair winter's work and be a wholesale benefit to the craft.

THE WEEKLY CHICAGO GRIST.

Special Correspondence to The Marine Record.

CHICAGO, ILL.—Captains W. H. Rounds and J. J. Rardon held a survey on the schooner F. L. Danforth last week and assessed her damages at $4,400.

Captain James Reid, wrecker, of Bay City, was in Chicago Tuesday.

Captain A. M. Elliott, of Kenosha, and Capt. David Crichett, of the barge Ashland, have become members of the E. M. B. A. (Lodge 3), Chicago.

Captain L. Young, of the steamer Pabst, and Capt. M. Finney, of the steamer Frank L. Vance, passed through here Friday from Milwaukee, en route for their homes to spend the holidays. Both were looking well.

The schooner John C. Fitzpatrick finished discharging her cargo of coal at Peabody's dock Saturday night, and two of Dunham's tugs towed her to her winter moorings, just below Chicago avenue, on Monday.

The Excelsior Marine Benevolent Association, Lodge 3, Chicago, will hold a ball and banquet at Battery D, January 31st, 1893. The committee of arrangements are: Captains J. Calbick, J. Hogan, Geo. McDonald, J. Donegan, Wm. Disher, Thos. Beggs, and Robt. Reid.

The steamer C. W. Elphicke, captain, C. Z. Montague, left Milwaukee at 8 a. m, and arrived here at 3 p. m. on Christmas day. Captain Montague says they experienced considerable ice between Racine and this port. The Elphicke came here to load. The night before leaving Milwaukee Capt. Montague received from the owners of the C. W. Elphicke a very handsome silver tea service as a present, with congratulations on his successful season of 1892.

The steamer Brazil was chartered last week by Keith & Carr for winter storage and delivery at Buffalo in the spring, and she loaded 99,000 bushels of wheat at Armour's elevator, at Goose island, Monday. They also chartered the schooner Redwing last week for corn for winter storage and delivery at Buffalo, and the schooner James G. Blaine, on Friday, for corn for winter storage and delivery at Port Huron next spring at 3½ cents per bushel, and she was towed up the south branch Tuesday afternoon to an elevator to load.

Captain A. L. Fitch, of the firm of Elphicke & Co., returned Tuesday from a trip to the Manitou islands, where he went in the interest of the underwriters to examine the schooner Annie Voight, ashore on the north-east end of the south Manitou island. He found that her stern had been carried away; otherwise she was in fair condition and there is a prospect of saving a considerable portion of her cargo of coal. Captain Fitch, while at Manitou island, learned that a man named John Swainson reports having gone on board of the wreck of the schooner Ostrich when it came ashore, and that he found conclusive evidence that she had been in a very severe collision, and he further reports that he found a portion of the wreckage of the steamer Gilcher near by, which he considered tended to prove that the Ostrich and Gilcher had been in collision.

The recent heavy frost has made much ice in Chicago river and the tugs are kept busy keeping it broken up so that transferring to docks and elevators may not be prevented.

WILLIAMS.

TWENTY-TWO WHALEBACKS TO BE BUILT.—NEW SHIPYARD AT DULUTH.—IMMENSE WHARF AND SHIPPING FACILITIES ARRANGED FOR.

Special Correspondence to The Marine Record.

DULUTH, MINN.—The new shipyard project that has been mentioned in THE RECORD already as starting in at Duluth, moves on apace, and the company has now contracted for all the machinery, some $20,000 worth, that it will need for the construction of vessels on a large scale. The buildings that are to protect this machinery are under way, and the first vessel will be on the stocks in a few weeks. She will be the only one to be built this winter. The projectors of this new concern do not intend to hurry matters, in fact, have not yet organized, but they are none the less in earnest for all that. They think that they have a good thing, and they propose to stand by it. It may be stated now that the first vessel will be one of the most shipshape and smoothest vessels that has ever been turned out of a lake yard. Rolls, punches, shears and other iron shipyard machinery are all bought and are on the way here. It is quite likely that the Great Western Electric Supply Co., whose location at Duluth and close to the new shipyard is now assured, and of which Gov. W. R. Merriam, of this state, one of the wealthiest men in the northwest, is president, will have a good deal to do with the shipbuilding company, in the way of furnishing supplies, castings, machinery and the like, both companies being closely connected.

As the result of negotiations completed last week in New York between the promoters of the Duluth, Mesaba & Northern road and the Rockefellers, the latter lend the road $1,000,000 for the purpose of building its line into this city, providing ore docks of its own here, and arranging all financial matters in connection with the road and its extensions. As part of the agreement, the Duluth, Mesaba & Northern road and the mining companies owned by the controlling interests in the road, the Mountain Iron, Biwabic, Miessaba Mountain and others, contract with the American Steel Barge company, in which the Rockefellers are leading stock holders, for the carriage of all ore that they may be able to swing, for a series of years. The deal is the most important that has been made in connection with the new range, as it assures the completion of the road, and its freedom from the influence of the Minnesota Iron company and the Illinois Steel company, and as well is a virtual pooling of the interests, as far as this business is concerned, of the American Steel Barge company with the Rockefeller and other heavy capitalistic interests combined therewith, the Duluth, Mesaba & Northern road, and the "Merritt" mines of the Mesaba, so-called. This in time will prove to be the greatest consolidation of iron mining and ore carrying interests on the American continent.

Resultants of the deal are about as follows as far as may at present be stated: The $1,600,000 that the road gets will pay the cost of construction, right of way, terminal property, docks, equipment etc., of the entire main line of the road, from Duluth to the Mountain Iron and Biwabic mines. The present issue of bonds held by the contractors and others, who have been engaged in work for the company, will be at once retired, and the new issue of $2,000,000 put up as collateral for the money. The twenty-four miles of line from the present junction of this road and the Duluth & Winnipeg to Duluth will be built this winter, and before the middle of January work will have begun on the extensive ore docks of the road on the Duluth harbor front, which docks are to be ultimately the largest on the Great Lakes. At first one double dock, 2,500 feet long, were put up; with its pockets on both sides it will have an annual shipping capacity of not less than 2,500,090 tons. Beside this, space will be left for a second dock

of the same size, and coal and merchandise docks will this winter be started close by. The work on these docks that must be done the present season will consume not less than 7,000,000 feet of lumber, much of which must be of special bills, and about 5,000 spiles.

To the American Steel Barge Company this combination of interests will have as interesting an effect as to anyone. The company has already appropriated money enough to construct 22 steel freight carriers, part of them steam and part tow vessels. Eleven are to be constructed within the next 20 months, or before the close of navigation in 1894. The yards of the company will, therefore, for that season present a scene of activity that has never been equalled in any shipyard of the world, if local vessel men conjecture rightly. Launching 3,000 ton ships are to take place at the rate of more than one every four weeks, and for part of the time they will be more frequent. Thirty-three thousand tons of carrying capacity will be turned out by this company, on its own account, in a twelve-month, and it states that it is still prepared to build on contract. In fact the keels for two vessels were laid this last week for outside parties. Ten vessels were built by this company last year, but the new record will far surpass this. Two more keels are to be laid down next week, giving six vessels on the ways and two unfinished in the water.

Local papers have had a good deal to say about the money that is to be put in by the new syndicate at Duluth in the manufacture of iron and steel, but there is so far no definite move in that direction. The financial deal is no more than has been indicated above. What may be in the future no one can say, but it is more than likely that there will be a very great and surprising extension of the manufacture of iron and steel at Duluth in the near future.

When the mines of the Mesaba are ready to contract, and do so contract, to deliver Bessemer ore at furnaces at Duluth at a uniform price of $2.00 per ton, and when there is such a market for the manufacturer as is opened by the growth and development of the west and northwest and all the territory that is opening to Duluth by the extension of existing railways and the readjustment of tariffs on present roads, a movement that is going on steadily. What is there, then, that can keep this head of the lake country from becoming one of the chief centers of production? With the extension of the lake waterway system to the ocean, and a uniform draft of 20 feet from the Atlantic to Duluth and Chicago, which is as sure to come as that the sun will rise for about five years, what is there to prevent the building of steel vessels for the mercantile and naval marine of all America close by the ore hills? THE RECORD never spoke a truer word than when it said last week that Lake Superior would be the center of lake shipbuilding in a few years. But, perhaps, this is going a trifle too far into the future; it is no more improbable, however, than what has been accomplished in the past few years on the shores of Lake Superior.

The Duluth & Iron Range Road has just let the contracts for the construction of ore docks that will increase the shipping capacity of the company to not less than 3,000,000 tons annually. About 1,000 feet of double dock is to be built, and all is to be finished by the early summer. With this work done the road will have 500 ore pockets of 180 tons capacity each, a storage of 90,000 tons. In the new work there are to be used over 6,000,000 feet of timber, 4,000 spiles and a quantity of hard wood and iron work. The cost of the work will be about $280,000.

By these docks of two railroads, and by the construction of elevators and mills and other work of an extensive nature that will be carried on this new year, the local consumption of timber, which reaches the figure of 75,000,000 feet annually, will be increased to at least 100,000,000 feet. No less than three mammoth grain elevators, each of about 1,200,000 to 2,500,000 bushels capacity, are to be built at the head of the lake during 1893. All of these are to go at the new harbor of old Superior, at the south end of the bay of Duluth, and near the new flour mills of the Lake Superior and Todd companies. One of these elevators is to be put in by the Van Dusen-Harrington Co., one of the heaviest receivers of grain on the Duluth board of trade; another by the Duluth Elevator Co., which now has three elevators here, and the third by the Minneapolis firm of Cargill Bros., which has a large number of country houses in the southwestern part of Minnesota and South Dakota. This firm has had a branch house on the Duluth board for the past year, and since the establishment of the grain rate that has resulted so seriously for the Minneapolis millers, has received a vast amount of wheat from the southwest. This wheat would have gone to the mills of Minneapolis, had the rates remained as they were last year. Each of these elevators are stated to be of 1,500,000 bushels capacity, but it is probable that they will be a trifle smaller than that. As a matter of fact, however, they will require not less than 4,000,000 feet of lumber each, besides a forest of piling. These elevators will increase the wheat storage capacity of the head of the lake to 25,000,000 bushels, and will also increase, which is more important to lumber men, the consumption of the year by 12,000,000 feet. With ore docks that will use more than as much more, and with mills and the usual amount of general building, the head of Lake Superior won't cut so much of a figure in the eastern timber market for 1893 as it had expected to.

Wheat continues to pile into the elevators here with a rush such as has never been known at this time of year. The increase in stocks for the week will foot up to the splendid figure of 1,500,000 bushels, putting 14,500,000 bushels in the houses, and leaving not less than 550,000 more, wheat and flax, in vessels. This leaves a total empty capacity of about 5,000,000 bushels. and as there is no indication of a let up to the receipts, and as the mills are now withdrawing but little, the room will soon be full. It seems that the farmers are afraid that all the room at Duluth will be taken before they get there, and all are hurrying forward as fast as possible. Thus the tremendous increase in the visible supply, and thus also the low price of the staple. There are indications that the wheat speculators in Chicago are trying to work a corner on the northwest, this market with the rest in May wheat, and the spread between Duluth and Chicago May is evidence in point. It amounts to about six cents a bushel now. It is said that this market alone has sold some 30,000,000 bushelsin May at Chicago, and there isn't any probability that this wheat can be got in there to fill. Elevator companies, mill companies, etc., here sell in Chicago against their purchases, so that there may be no speculations in their dealings, but if a corner can be successfully worked against them they will have jumped from the frying pan into the fire. However, December is a long way ahead to begin a corner against May, and the chances are ten to one that it will fail. There will be, however, an enormous amount of wheat to go out of here when navigation opens in the spring, probably even more than last season, when the Duluth wheat stocks held up lake freights for some time before upper lake ore began moving.

TWENTY MILLION DOLLARS FOR WHARVES AT BUFFALO—PRIVATE ENTERPRISE

Special Correspondence to The Marine Record.

BUFFALO, N. Y.—The principal event of the week in marine circles was the unexpected dissolution of the Lake Superior Transit Company, which has been doing a prosperous business since its organization in 1878. This company owned no boats, but had under charter from the Anchor Line and Western Transit Company, a fleet of steamers which included the China, Japan, India, Philadelphia, Montana, Vanderbilt, Empire State, Badger State and Gordon Campbell. Previous to 1890, the Lake Superior Transit Co. handled the freight coming in over the Erie, New York Central and West Shore roads bound for Lake Superior. In 1890 the Erie drew out of this pool and the reason commonly attributed for the sudden dissolution of the company is that the other two roads determined to handle their own Lake Superior freight another season. General Manager E. T. Evans, however, says this is not true, but will give no reason for the action, though he says the company has always done business at a profit. He gave out this mysterious utterance: "The objects for which this company was formed have ceased; therefore it goes out of existence." It is likely that the two new steamers building for the New York Central may have some significance in this direction. All the clerks, to the number of 30, have been notified that their services will not be needed after Jan. 1.

Some rather vague statements regarding a scheme of great magnitude for the extension of Buffalo harbor were made public last week. The plan is to make all the extreme southeasterly end of Lake Erie from Stony Point an addition to the present harbor and to construct canals, docks, elevators and warehouses on a tremendous scale. The estimated outlay necessary to carry out this enterprise is stated at $20,000,000, and the Lehigh and Lackawanna roads, besides other local and outside capital, is said to be interested. Nothing really definite can at present be ascertained regarding this project, but large transfers of real estate recently made in the immediate vicinity of Stony Point lead to the belief that some move of importance is being formulated.

Active work has been begun at the new Gatling Ordnance Company's property down the South Shore, and the casting house, which is to be 150 feet wide and 250 feet long, will be completed next July.

The Lake Stewards gave a most successful ball at Concert Hall Monday night, and no expense was spared either in music or interior refreshments, which were both first-class.

The first annual ball of the Buffalo Harbor Tug Pilots' Association occurs next week. Its financial success is already assured and it promises to be an enjoyable affair in every way. P.

OWEN SOUND, ONT.

Special Correspondence to The Marine Record.

Last week the Owen Sound *Times* received the following telegram from a morning paper published in a city on the south shore of Lake Erie which I take for the Toledo *Commercial*, "Has the British Government any vessels at Owen Sound, if so what ones. Are they cruisers, gun boats or revenue cutters? What is their supposed mission? Any information gratefully received." Ed. Morning *C—l.*

In reply the *Times* stated that there was only the new cruisers, etc., all of which is well known to the readers of THE MARINE RECORD, however, this excitement about war vessels may be a big advertisement for the shipyard here, and their fame for building heavy iron clads has no doubt been heralded all over the United States and Canada, coupled with which, the Toledo *Blade* has gone out of its way to make insulting and sneering remarks about this town, which on account of the garbled version, no doubt emanated from the dizzy brain of a reporter whose venomous twaddle ought not to have been seen in the pages of so influential a newspaper as the *Blade*. I am pleased to note that this scandalous article has been fittingly answered by one of our local papers.

Quite a number of the mariners who placed their boats in winter quarters at this port have left for their homes among whom are Captain Anderson of Sarnia, Captain McDougall and Captain McAllister of Toronto, Stewart Masterson is at Cleveland, Stewart Dowding at Detroit, Purser Edwards at Sarnia and Engineer Lockerbie at Collinwood.

The fishery cruiser Petrel came up as far as the C. P. R. elevator on Thursday afternoon last and remained there until Friday morning, it was intended that she should make an official trial trip but later orders were telegraphed to stay at the yards until further instructions were received from Ottawa. T. W. B.

COL. LUDLOW, CORPS OF ENGINEERS, U. S. A., REQUESTS A COURT OF INQUIRY.

Every military officer feeling himself agrieved by any reflections which may have been passed on his standing is at liberty to, and in fact expected to, ask for a court of inquiry in the case.

This view of the matter has now been accepted by Col Wm. Ludlow, and the President has directed a court of inquiry to get at the facts relating to the late unpleasantness between that officer and the Light-House Board, from a military standpoint. This court of inquiry is by no means a court martial, as it has been convened simply to report and summarize the evidence and express its opinion thereon. The court will consist of three officers from New York harbor, and will meet in Washington City, the 5th of January, or as soon thereafter as may be practicable.

U. S. M. FLAG.

A flag has been adopted for ships carrying the United States mail the regulation size of which is to be 20 feet long, 8 feet 6 inches at the mast and 5 feet at the end of the swallow-tail. Its field is red, bordered by a blue margin of nine inches. In the upper left hand corner is an eagle in blue, with arrows and a branch in its talons, and bearing on its breast a shield with stars and stripes in red and white.

FLOTSAM, JETSAM AND LAGAN.

The steamer Robert Mills will receive a new boiler at Buffalo during the winter. Her engines will also be reduced in size.

The steamer Bulgaria of the Corrigan fleet is having her three masts removed at Milwaukee. She will carry two pole spars instead.

A telegram from Cheboygan under date of December 27, reports the Straits of Mackinac frozen over and that the temperature has been down to 10° below zero.

Lieut. Robert E. Peary, U. S. N., the Arctic explorer, has already written to St. Johns, N. F., to engage a ship for his proposed expedition to the North next summer. He says that applications to join his party are coming in with every mail.

Capt. James F. Trowell, ex-harbor master at Milwaukee, computes the steam fleet wintering at Milwaukee as having a wheat carrying capacity of 4,320,000 bushels, while that of the schooners and barges as 513,000 bushels. Total 4,833,000 bushels.

Among the Canadian exhibits at the World's Fair will be a mariner's compass said to have been used by the pioneer Jacques Cartier on his first visit to the lakes.

The Department of Marine has ordered Capt. F. B. Hackett, of Amerstburg, who has the contract for the removal of the sunken schooner Minnie Davis, not to begin work until he receives further orders.

SERVICE IN THE NAVY.

The United States Navy is now enlisting men in such capacities as they are fitted for, for three years. The requirements at the Navy Yard, Brooklyn, N. Y., for naval recruits are announced as follows:

"All applicants must pass a rigid physical examination, especially as to eyesight, have good teeth and be free from hereditary disease. Applicants over 18 and under 21 years of age can be enlisted with the legal consent of parents or guardians.

"You had better submit yourself to a careful physical examination by a medical man before applying.

"For Landsmen—Men with no knowledge of sea life over 21 and under 25 years of age. If the applicant has a mechanical trade, the age limit is extended to 34 years. The pay is $16 per month. No examination except the physical for those having no trade.

"For Ordinary Seamen—He must have been to sea at least two years and pass an examination in reefing, steering, knotting and splicing, etc. The pay is $19 per month.

For Seamen—He must have been to sea at least four years and pass a rigorous examination in seamanship. The pay is $24 a month.

For machinist—A candidate for machinist must be between 21 and 35 years of age, and must be able to write legibly and understand enough arithmetic to properly keep the steam log; for this he must be able to work decimal fractions. He must preferably have served at least one year on a sea-going steamer, and must thoroughly know the the names and uses of all parts of modern marine engines and boilers, and how to care for them and regulate their action under various conditions likely to occur in practice. He must be a good machinist and it is desirable that he should be able to do rough blacksmith's and coppersmith's work. The pay is $70 per month.

For 1st Class Firemen—A candidate for 1st class fireman must have had experience as a fireman on a steamer and must know about marine engines and boilers and their attachment. He must thoroughly understand the management of the fires, how to use and regulate the different valves on the boilers and the different pumps. He should know how to put on a soft patch, be able to wrap pipes, to stop a leak. He must know how to pack the stuffing boxes around the engines and how to grind in valves, etc. He must also understand about oiling the working parts of an engine. The pay is $35 per month.

For 2d Class Firemen—A candidate for 2d class fireman must have had experience as a fireman, preferably on board a steamer, and must understand the working of fires. He should know something of the engines, the different pumps, the boilers and the attachments to the boilers and their uses. The pay is $30 per month.

"All rates are entitled to one ration per day, equal to $9 per month of 30 days."

THE FUR-BEARING SEAL.

The fur seal has been almost exterminated in the Antarctic regions and are now only to be found in the less frequented waters of the North Pacific Ocean, including the Alaska Territory and Bering Sea. This was a completely isolated breeding place until the Russians began to make an inroad on the preserves, since which time the fur seal has been assiduously hunted and captured and the skins shipped to London for preparation previously to being worn. The male seal reaches the breeding place in May and is shortly afterwards followed by the female, when the pup seals about a foot long and weighing from two and a half to four pounds are born. When about four months old, or in August, the pups begin to move about, and by the end of November are expert swimmers, migrating with the older seals to more Southern localities, but returning to the breeding places inthe following summer, much after the manner of salmon in the rivers of that region. June and July are the months when the seal hunters reap their harvests off the islands, but the young seals are not worth killing for their fur until they are at least three years old. It may not be generally known that the fur on a seal is hid under a coating of hair, like the down on geese is hid under the outside feathers, and anyone endeavoring to pluck the hair off a sealskin would think he was justly entitled to the skin for the time and labor spent in plucking it. The writer has had a practical experience of this hair-plucking business, and would not accept a carload of sealskins if they had to be plucked by hand.

THE survey on the steamer Inter Ocean at Milwaukee has been completed. It foots up $4,200.

PRINCE EDWARD ISLAND TUNNEL TEST.

ILLUSTRATED.

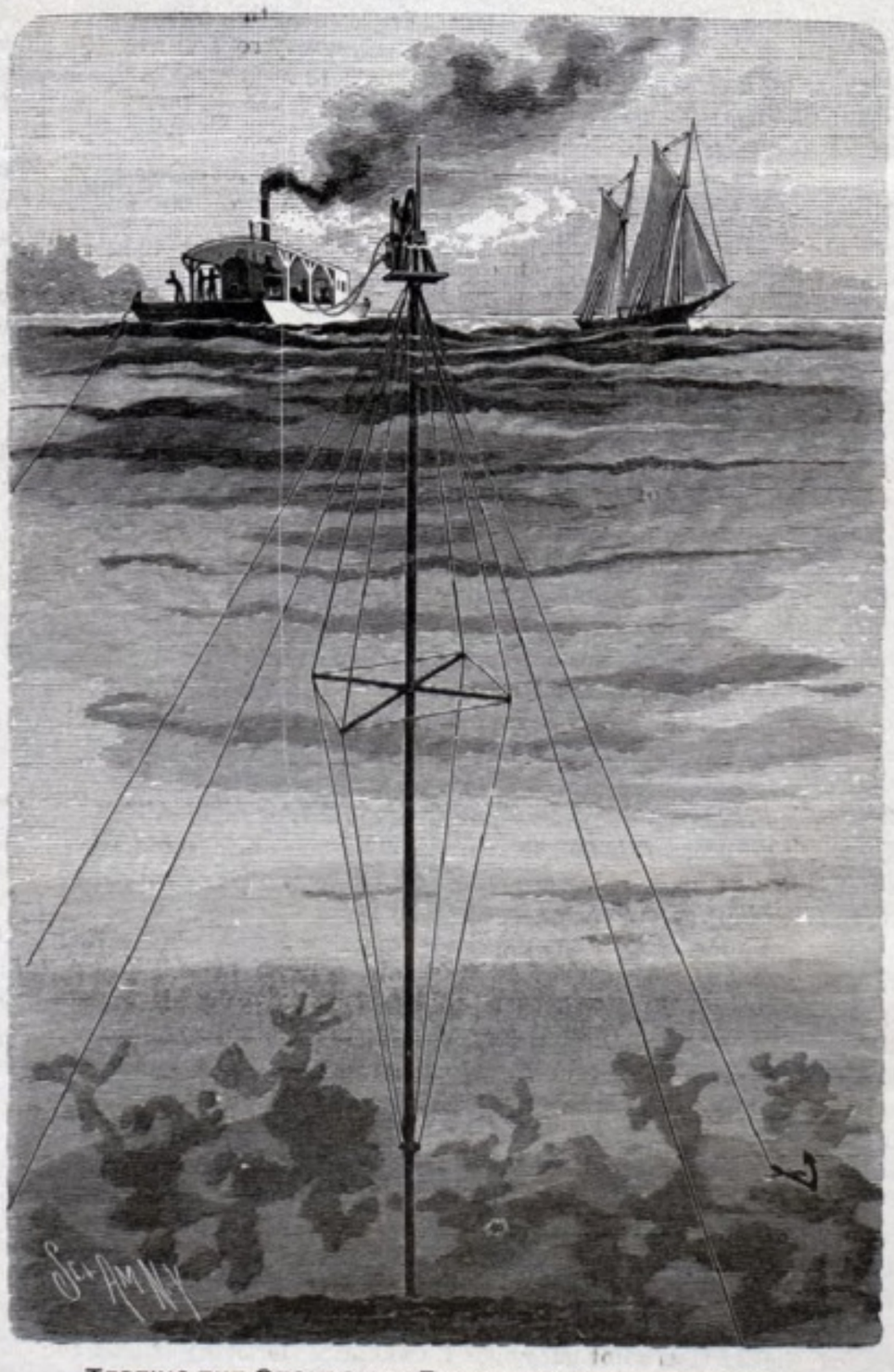
It sometimes happens that an engineer by a simple, bold expedient revolutionizes certain engineering processes, and not only greatly reduces the cost of construction, but renders possible either a new class of work or develops a new phase of work in well known

ROUTE OF PRINCE EDWARD ISLAND TUNNEL.

lines, either of which could not have been successfully carried out by the old methods.

Through the courtesy of the *Scientific American* we are enabled to present to our readers the following descriptions and engravings of the work:

"Examples of inventions of this class will occur to the reader, and we have now to add to the list the record of an



TESTING THE GEOLOGICAL FORMATION OF THE PROPOSED ROUTE OF THE PRINCE EDWARD ISLAND TUNNEL.

engineering feat which, in the boldness of its conception, the simplicity of the devices by which it was executed, the success attained, as well as the bearing of the work on associated interests, will compare favorably with any engineering work of like magnitude.

The work contemplated was the construction of a tunnel between Prince Edward island and New Brunswick, as shown on the annexed map, the distance being eight miles. The problem presented was that of testing the nature of the earth between the proposed termini of the tunnel; but the Straits of Northumberland being perpetually stormy and the depth of the water being more than one hundred feet, the problem was not so simple as it might appear.

Our engraving illustrates the way in which the feat was accomplished. The method and apparatus are the invention of Mr. Alfred Palmer, C. E., of the Mills building, New York. A four-inch wrought iron pipe made up of 20 foot lengths rests upon the bottom of the sea, and upon the upper end of this pipe, which reaches above the surface of the water, is arranged a platform on which is mounted an engine running at a high rate of speed. The pipe is trussed to make it rigid and it is supported in an upright position by means of four wire ropes set out at right angles to heavy anchors. The engine drives a diamond drill at the rate of 1,000 revolutions per minute. A scow anchored near the pipe carries a 10 horse-power boiler and other necessary machinery, the boiler being connected with the drill engine on the upper end of the pipe by means of flexible tubing. Another flexible tube supplies water to the drill for lubricating purposes. By means of this arrangement the drill is always held in a vertical position, and is not subject to any vertical or lateral movement, although the scow carrying the boiler and pump may be tossing about in a heavy sea. The current in the channel offers a resistance to the pipe of 36 pounds to the square foot, but it is so thoroughly braced and stayed that it easily resists this pressure.

The tests made indicate that the formation is highly favorable to tunnel construction. The contract for the tunnel is being carried out under the direction of the Dominion government, represented by Hon. George E. Foster, Minister of Finance, Mr. Collingwood Schrieber, Chief Engineer, and Sir Douglas Fox, Consulting Engineer, of London. Mr. Alfred Palmer is reporting engineer for Sir Douglas Fox."

THE BUREAU VERITAS CLASS.

It is with some degree of interest we note that the cabalistic signs awarded by the Bureau Veritas in their classification of vessels is held in the highest repute by the San Francisco grain shippers and underwriters, to the, we may say, general exclusion of the English Lloyds and other well known classification societies who survey and rate over-sea American sailing ships.

We have now a list before us, printed by the *Commercial News and Call*, of San Francisco, containing upwards of thirty large American ships, including the 3,400 ton ship "Roanoke," all classed by the Bureau Veritas 3.3. L II and 3.3. A II, on their way from New York and Philadelphia to San Francisco.

From this classing of the fleet by the Bureau Veritas signs (an explanation of which was recently published in THE RECORD,) it is not to be supposed that the fleet do not hold a classification from other societies, but it is noteworthy that in soliciting so perishable an oversea freight as California grain, the Veritas class should be held forth so prominently and undoubtedly as an inducement for shippers to charter at the best rates of insurance, and of course this is done distinctively on the class and its standing which the ship holds.

This society, founded in 1825, has become an international register of shipping of universal repute and it is gratifying to those who are interested in the modern lake marine to find that the fame of lake shipping has so stirred up this and other classification societies that agents have been appointed to note the maritime enterprise and advancement of lake shipbuilding, owning and handling, and the many calls for information on this and kindred subjects which THE RECORD has received from abroad bear ample testimony to the awakening of our distant friends to the importance of this now enormous industry.

The courteous and thoroughly qualified representative of the Bureau Veritas for the American Lake Department, is Captain F. D. Herriman, who as chief inspector for the entire district will no doubt early enlighten the Veritas principals on the splendid strides the lake marine is now making towards constructive and equipment efficiency, and the perfection of class and designs for the special trade in which our vessels are engaged.

THE propellor Point Abino made an unsuccessful attempt to reach Port Huron but returned to Sandusky on Friday, having encountered too much ice on the lake to proceed. December 23 is rather late sailing this season for ordinary tonnage, but for vessels sheathed or ironed there was no ice on Lake Erie of sufficient weight to prevent them from reaching the rivers.

TESTING A NEW FLASH LIGHT FOR LIGHT-HOUSES.

The test of a new flash light designed has just been made for use in light-houses at the testing house of the Light-House Board on Staten Island, under the direction of Major D. P. Heap, United States Corps of Engineers and Captain W. S. Schley, United States Navy.

The apparatus which produces the flash light is the invention of a German named Schirm. And the test was in accordance with an order from the Light-House Board.

The light is controlled by a clock-work attachment and an electric device. The electric current sets in motion a complicated piece of machinery that operates a bellows and forces a jet of naphtha gas through a recptacle filled with powdered magnesium. A portion of the magnesium is carried through a tube by the volume of gas to a constantly burning flame that ignites the gas as well as the magnesium, producing a very brilliant light.

The flash is said to be of 400,000 candle power and in brilliancy it resembles a flash of lightning and the inventor claims that it can be seen as far away as the horizon will permit.

At the conclusion of the test neither Major Heap nor Captain Schley was prepared to say what the report to the Light-House Board would be. Major Heap, who has been experimenting with the new light for several weeks, said that it had several advantages over other lights now in use. The principal drawback he has discovered is the fact that the burning of the naphtha gas and the magnesium produces fumes which he thinks will settle on the glass windows of the light-houses and obscure the light.

With the new light the intervals of darkness between the flashes are much longer than the flashes. Major Heap favors a light in which the flashes of light are longer than the intervals of darkness between them. But further tests will be made before a report is sent to the Light-House Board.

Besides the test of the flash light a test of a new revolving alternating red and white light was made.

NATIONAL RESOURCES TO AID THE NICARAGUA CANAL.

The Nicaragua Canal Bill, which has held the attention of the Foreign Relations Committee since the beginning of the second session of Congress, has at last been completed and favorably reported by Senator Sherman, who gave notice in the Senate that he would call it up at an early date and endeavor to secure prompt action upon it. The new bill included a proposition to guarantee bonds of the company to the extent of $100,000,000 to aid in the construction of the canal.

The new bill, however, contains some additions which increase the obligations of the company as well as the security of the government. For instance, in the second action, the real and personal property and franchises of the company are included in the liabilities. In the third section it is provided that all of the stock heretofore subscribed for or issued shall be called in and canceled; that all bonds issued shall be redeemed and canceled, and that all outstanding obligations shall be satisfied before the act takes effect. The dates are changed so as to make the bonds issue Jan. 1, 1893, and to make them mature in 1953 instead of 1911, as is proposed in the original bill; and they are also made redeemable at the pleasure of the United States after 1913. The section requiring the company to execute a mortgage to the United States as security for the guarantee is amended by the addition of a clause requiring the mortgage to contain a provision for a sinking fund for the payment of the bonds at maturity. In addition to section 6 of the old bill, it provides that if the company default in the payment of interest or in other respects before the canal is put into operation the right of foreclosure shall at once attach in favor of the United States.

Perhaps the most important changes in the bill are those made in the ninth section relative to the issue of stock. In the new bill this is limited to $100,000,000 to be retained by the company; the amount stipulated to be delivered to the government of Nicaragua and Costa Rica according to the concessions; and the remainder to be issued to the United States, full paid, and not subject to assessment; to be voted by the President of the United States or his proxy at stockholders' meetings, and but three directors are to be selected from holders of the stock other than that owned by the United States. In the last section an amendment is made so that ten instead of six of the fifteen directors shall be appointed by the President of the United States, not more than five of whom shall be appointed from one political party.

In the event of the reconstructed bill being passed by Congress, the United States will be in a much better position in relation to the Nicaragua Canal than Great Britain bears in the national and executive control of the Suez Canal. This all-important waterway to the United States but connects our coast-line from the Atlantic to the Pacific. The Suez is Britain's route to India.

CHASING ACROSS THE ATLANTIC.

The Inman Liner City of Paris, which vessel, with the City of New York, will, when she comes out in the spring fly the stars and stripes, has just had a race across the Atlantic with the Cunard Liner Etruria and was somewhat badly beaten on the passage.

Both vessels left New York December 17th, the City of Paris leading over the bar by about twenty-five minutes. On December 24th the Etruria passed the Old Head of Kinsale at 4:50 a. m. and the City of Paris at 8:40 a. m. Considering the difference of time in the departure, the Paris was beaten by four hours and fifteen minutes.

If she does no better next spring the blame will be placed on her American officers, so we record this event for future evidence.

THE WELLAND AND SAULT ST. MARY'S CANAL TOLLS.

Secretary of the Treasury Charles Foster says the Canadian government has shifted ground on the canal controversy. Under the treaty of Washington navigation of Lake Michigan was accepted by Canada as ample equivalent for the navigation of the St. Lawrence by the United States. If it was so in 1817, it must be so now, when operations in Lake Michigan have increased many fold. But every attempt to bring about a better understanding of the question of the canal tolls has been met by the demand of Canada that the free navigation of the Hudson river shall be thrown in by us as the price of Canada's fullfillment of the simple terms of the treaty of Washington. Mr. Foster points out that even if the president was inclined to make such a valuable concession, he has not the power.

THE U. S. S. MICHIGAN.

It is not generally known, even on the lakes that the U. S. S. side-wheel steamer Michigan is the oldest iron vessel in the United States Navy. She was built by the government at Erie, Pa., in 1844, from Pittsburg iron and notwithstanding her ocean and coast service, the hull is in a perfect state after forty-eight years' wear. This is certainly enough to warrant the opinion expressed by many regarding the anti-corrosive qualities of fresh water, and to give an iron ship built of good material, a class for a century, subject only to periodical or special survey, after stranding, etc.

The Michigan is now at the Union Dry-dock Co's yards in Buffalo, receiving two new boilers from the Lake Erie Boiler Works, and on the early opening of navigation will be dispatched to the World's Fair to do duty at that sure-to-be-crowded wonder of the world.

The displacement of the Michigan is 685 tons, capacity 450 tons, length on keel or between perpendiculars 163 feet, 3 inches, beam 27 feet, 1½ inches, draft 9 feet. She is barkentine rigged, engines, 305 I. H. P. and is rated to steam 10.5 knots per hour, with a bunker capacity of 135 tons of anthracite coal.

NAVAL SECRETARY OF THE LIGHT-HOUSE BOARD.

Commander Robeley D. Evans, U. S. N., the new naval secretary of the Light-House Board, succeeding Commander Coffin, was born in Virginia in 1846 and entered the Annapolis naval academy in 1860. He has twice been detailed as Inspector of the Fifth Light House District and once before appointed as naval secretary to the Light-House Board. Commander Evans will be remembered as the officer who made such an excellent showing in Valparaiso harbor during the recent Chilian imbroglio resulting from the outrage committed on the seamen of the U. S. S. Baltimore. It was during this period that the nicest diplomatic discretion, coupled with the necessary courage to uphold the national honor at any cost, was necessary. Then it was that people began to recall the sobriquet of "Fighting Bob." Their confidence in him and the reliance of the government were not misplaced. He declared that the refugees, once on board his ship, would be protected if they all went to the bottom together. The insult to our flag through the stoning of the commander's boat was promptly resented by the demand on the part of "Fighting Bob" for suitable apology from the Chilian vessel of war. This demand he enforced by notification that if it were not granted by a certain time the guns of the American ship of which he was the commander would be trained upon the Chilian man of war and redress exacted at the cannon's mouth. And by his courage and discretion in that emergency Commander Evans did more for the American navy than any statesman who ever lived. When there was no further need of his services in Chilian waters Commander Evans was ordered to the patrol of the Bering Sea and there he carried out the instructions of the government in an able and efficient manner.

Unlike many of our naval officers Commander Evans has no taste for life ashore and less taste for society. He looks forward to the growth of the new navy with great interest, and the ambition of his life is just now in the direction of one of the new battleships and active service at sea. If he lives many years he will doubtless command a fleet of them and Midshipman "Fighting Bob," or the present Secretary of the Light-House Board, will have become "Fighting Bob," the Admiral.

ANNUAL REPORT OF THE CLEVELAND FLOATING BETHEL.

The Floating Bethel and Chaplain Jones, the hearty, one-armed "sky pilot," is known to almost every seaman who has traded to the port of Cleveland during the past quarter of a century.

The "Floating Bethel" is not the Associated Charities, and is quite distinct from the Bethel of the Western Seaman's Friend Society.

The Floating Bethel is the "light" to bear up for in an extremity of body or soul. If dunnage or sustenance will help a sailor keep along on a straight course, Chaplain Jones, (through the medium of his friends, and they are legion) will beat dead to windward to obtain the needful for extreme cases, and this too, at any time, blow high or low, rain or sunshine. He is only happy when hustling for the good of others, and, if the soul-case is losing its bearings, he'll labor to spend himself in consolation until a light breaks on the horizon; but, with all this energy of goodness, woe betide the fraud, turnpike sailor or guzzler when discovered playing upon the credulity of honest people as they not unfrequently are in the course of his ministrations. At the same time, men of all creeds, ages and stations in life, after sighting the Chaplain regularly and watching his work for twenty-five years, can not say that a worthy case brought to his notice has ever been neglected, or even slighted through an indiscreet judgment of the degree of want, worthiness or destitution.

From the annual report of the Floating Bethel before us, the following facts are gleaned, demonstrating that this worthy institution has done good work during the year now drawing to a close.

Chaplain Jones has held 415 Bethel and funeral services. He has preached at the Euclid avenue, Madison avenue and Park Congregational churches, at Bethany Presbyterian church, Glenville M. E. church, Academy of Music, Doan Mission, the Alliance church and camp-meeting and the Tabernacle. He has led two of the Mills' Union converts' meetings, and assisted in forty-one other meetings, making a total of 467 services. He has done all the investigation in cases brought to the notice of the Floating Bethel, and collected the funds. His assistant, Harry Turney, has held over 153 Bethel services and conducted 11 services at Doan mission, 7 at the Carl street mission, one at the Friendly inn and one at Everybody's mission. He looks after the chapel and reading room, and does a hand to hand mission work among the men. Mrs. J. F. Reese still presides at the organ, keeps the journal of the services, and visits the Invalid's home. Eighteen thousand, seven hundred and ninety-six persons have attended Bethel services, 1,677 have risen for prayers and 700 inquirers have attended the after meetings.

This we opine is a good rendering of a year's work, yet, to further show how the mission is tended we quote from a letter contained in the annual report as follows:

CLEVELAND, O., October 10, 1892.

Dr. J. H. LOWMAN, City:

The bearer is a very worthy woman whom I have befriended in times of trouble during the past twenty-four years. Her first husband had his head badly jammed between the pier and a vessel entering our harbor in a gale of wind, as he was running a line in a boat. His wife during his long sickness supported him by doing washing. While answering one of her husband's calls to his bedside her little child fell into a tub of hot water; after a severe spell of suffering the child died. The husband, seeing that his good, devoted wife was breaking down under the cares and labor that she was compelled to bear up in, left his bed before he was able and went to work for the city at the water works crib, having charge of the small boats engaged in the work. In a gale of wind, while attending to duty in his weakened state, he fell and was killed and left his widow with one child.

In the course of two years she again married one of the best sailor men out of this port, who soon rose to the position of first mate, and who would long ago have commanded one of our best steamers but for a stroke of paralysis that he suffered, which disabled him and destroyed his prospects of future success. His faithful wife was driven back to the washtub; her eldest son took sick and died, and a child born in the second marriage, being then about three years old added to her cares. She has been compelled to bear the burdens till she has began to break down. Her husband, with his eyesight defective, driven by the needs of life to do all he can, with the help of his seventeen year old son, shipped for $20 a month on a lumber barge. While at work he fell and broke two of his ribs, and with his other afflictions added to this he will probably never be able to do any more hard work. His poor wife is sick and I write to ask you to add to your free list of patients this most worthy case. Neither laziness, intemperance nor any other vice has had a hand in this family's afflictions. I feel it is due you that I give you these details as you have taken so hearty an interest with me in my mission work for years. I will see that their rent is paid, and coal and other necessaries furnished.

Your friend J. D. JONES,
Chaplain Floating Bethel.

The foregoing letter is characteristic of the Chaplain's work and thoroughness and is but one of many similar vouchers contained in his annual report, which closes with the honest, brief, seaman-like query: "If we can do better service for God and man, tell us how?"

The Marine Record,

ESTABLISHED 1878.

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CLEVELAND, O., DECEMBER 29, 1892.

COMPLIMENTS OF THE SEASON.

THE MARINE RECORD with the present issue, closes its Fifteenth Volume, and we venture to say that the course taken during the year just closing has been a benefit to the interests for which we print. As customary with technical papers on the event of a new volume, and especially when this is coupled with the opening of a new year, we desire to thank our subscribers and advertisers for the liberal patronage and the many courtesies received at their hands during the year, as well as for the many words of praise and good will that our efforts to make a good and entertaining, as well as instructive paper, have prompted, and to wish one and all a happy and prosperous New Year, on their passage to the milestone marked 1894.

We have striven to keep before our readers the departures necessary for the advancement and best interests of the lakes and merchant marine, and by the publication of new orders emanating from the department of navigation and all changes in the aids to navigation sent out by the Light-House Board, as well as important legislative action affecting the maritime interests, we may modestly credit ourselves with keeping our readers well posted on all those matters closely concerning their interests, not the least of which may have been found in our column of marine law decisions, as all of these cases have been closely scrutinized previous to publication and selected on account of their having a general application or tendency to point out to the master of a vessel, the shipper and vessel owner any important technical points that in their entirety may have escaped their close attention.

We also take occasion at this time to thank all journals interested for their kindly notices of our progress and enterprise, of which the columns of THE MARINE RECORD during the year just closed bear witness.

THERE are at present a sufficient number of United States citizens sailing and earning their living in British steamships in the Atlantic trade to mann our new ocean "greyhounds" City of New York and City of Paris There are also a fair sprinkling of talent throughout the sailing ship fraternity, but, with the advent of such ships as the International Line fleet, the desire will be universal throughout the mercantile marine of the United States for a higher standard of technical education. This, in fact, is the first step toward a rehabilitation of the nation's merchant marine service.

A revelation to mariners comes in the form of a report from the master of the steamer Laurestina just arrived at New York, wherein he states that on Friday last the vessel entered the circle of a hurricane sixty miles southeast of Nantucket and besides getting his vessel badly iced up, his three alcohol or spirit compasses froze into solid blocks of ice and were thus rendered useless for navigational purposes. Such an experience would seem to warrant the discontinuance of spirit compasses for high latitudes, but, notwithstanding the assurance of the master of the Laurestina that the alcohol contained in his liquid compasses was of good proof quality, we very much doubt that such was the case. The circumstance, however, tends to show that the spirits contained in a compass bowl should be tested by a proper authority and the maker guaranteeing such tests would no doubt find the system appreciated by an increased patronage, though even this precaution would be rendered nugatory if some thirsty wretch undertook to do a little spiling on his own account. Spirit compasses have been tapped and never a bubble left to show the steal, but frozen with proof alcohol is out of the question. Many other steamers encountered the same blow without noticing their compasses becoming even sluggish and we opine that the Laurestina's "sea clocks" had at some time been tampered with.

INSPECTION AND CLASSIFICATION OF LAKE-BUILT IRON AND STEEL VESSELS.

Nothing new has developed in marine insurance circles regarding the enlargement of the Inland Lloyd's, or the adoption of any other system of classification for lake-built iron and steel vessels.

It would appear that underwriters have not as yet met on common ground, and they are apparently as far apart in their ideas of what is necessary to meet the wants of lake underwriting, as the art of ship building is from their particular and special sphere of business. Nor could any other result be expected from so one-sided, if not arbitrary, an arrangement, whereby insurance men would be left to dictate as to the construction, rating and classification of their own risks. Such a method would be tying builders and owners down with a vengeance, therefore it is not likely to eventuate.

While no particular stress is being laid on the necessity of inspecting wooden hulls, efforts have been made to get at the true worth of the iron and steel hulls from an underwriters' standpoint, yet, from the present indications it looks as though no agreement can or will be reached by the marine insurance fraternity, although the time is slipping rapidly away, and overtures must soon be made for a basis on which to conduct next year's business

From the foregoing it may be judged that whatever steps may be taken by owners and builders to remedy known existing cases of structural weakness, the entire proceedings will be at their own discretion and not at the instance, request, or demand of the underwriters. At least, this is how the situation looks to us at the present writing. In the premises, owners need have no fear that they will be left without insurance, as the companies already in the field, strengthened by the advent of some recently organized and other new capital will be fully able to furnish all the security required on hull and cargo.

The mooted plan to assess owners for a portion of the expense connected with issuing a classification register seemed hardly equitable when owners were not to be allowed to have any voice in determining the rate of insurance on the severally classed risks, and it is now fair to assume that this point, or feature, has been very properly dropped out of the discussion.

It is but just to state, however, that underwriters have looked with so much faith on metal hulls that they have written on individual policies unequal amounts as compared with their writings on wooden hulls, and as this was their own seeking, they are the only ones who should suffer. The wooden hulls have, without a shadow of doubt, been uniformly profitable, and for that matter, so are the iron and steel hulls in the long run, as the losses of this year by no means make serious inroads into the accumulations of premiums from this class of risks, and if some of the offices have suffered severely, it is simply on this year's business, and not on the premiums absorbed through a series of years.

Regarding the alterations or strengthening of iron vessels, owners can safely be relied upon to take such steps as will help preserve the lives of those in their employ, as well as their own property, which is rarely insured to its full value.

It is barely possible that some arrangements will yet be made by the underwriters with one of the outside classification societies to assume the making up of the Inland Lloyd's for another year, but the time is too short to do other than start the work, as no general classification could be attempted, yet, the labor might be directed mainly to the metal hulls in which underwriters admittedly are more interested at this time than any other class of tonnage. In fact it is now rumored that universally known classification societies have been asked to submit an estimate of the cost of inspecting and classifying this portion of the lake fleet so as to arrive at a fair discrimination between the risks of special tonnage.

Owners of both metal and wooden hulls, need not, however, as we have said, borrow any trouble about being left out in the cold at the opening of navigation next season. There will be ample capital eager to write their property, inspected or not inspected, classed or otherwise, and this too at adequate rates. In any case the tariff of 1892 will most assuredly not be increased on any class. There is too much insurance capital in the field, increased as it will be by spring, to allow any unanimity of action among underwriters, looking towards an increase of the tariff. In short, there are too many mouths to feed, a condition of things that means lower rates rather than higher ones.

INDISPENSABLE, NECESSARY, DESIRABLE.

In relation to the asinine classification of aids to navigation desirable to carry on the commerce of the country, the Treasury Department and formerly the Light-House Board stultified their official standing by a nonsensical grading of the requisite aids, as follows: "Indispensable" "Necessary" and "Desirable."

Whoever is responsible for evolving such a ridiculous policy is to be blamed for being the cause of withholding desirable aids that are indispensably necessary for the safe conduct of life and property on the waters of the lake and coast.

On several occasions recently we have takes the initiative in pointing out this paradoxical system of asking Congress for aids to commerce and courting defeat, negative action or refusal to comply by the very terms in which the request is couched.

As we alluded to the form of discussion that would probably take place on this question in our issue of the 8th and 15th Inst., we herewith reproduce a few of the raps made in Congress on the 21st Inst. and this is done so that whatever aids may be asked for in the near future, may be asked for.

Mr. Dockery—"I move to strike out * * * Are all the light-houses carried in this bill classed as 'indispensable" by the Light-House Board? * * * I desire to support all propositions classed as 'indispensable,' not any others.'

Mr. Lind—"There are several aids asked for that would be classed as only 'necessary,' but two, regarded as 'indispensable' by the officers of the Light-House Board, carry the largest appropriations, the light-ships at Mackinaw Straits and the light-house off Gray's Harbor. Those carry nearly $300,000, and they are absolutely indispensable."

Mr. Dockery—"Will the gentleman state the cost of 'indispensable' and the cost of 'necessary' aids?"

Mr. Lind— * * * "There are three items aggregating in cost $4,000 or $5,000 that might possibly be dispensed with, but, it is the large items that are absolutely necessary."

Mr. Dockery—"But not 'indispensable?'"

Mr. Lind—"Indispensable? I do not see any great difference between 'absolutely necessary' and 'indispensable.' When I say absolutely necessary I mean indispensable." * * *

So the discussion continued with a strong desire to strike out all aids classed as "necessary" or "desirable," until the Committee of the Whole House finally reported that the omnibus bill granting thirty-eight aids to navigation on the lakes be amended and passed, so that the next lookout is to see that the action of Congress carries along with it the necessary appropriations to establish the aids required.

The House having adjourned for the holidays, or until January 4th, it would now appear that the superlative terms used in designating aids to navigation will be entirely ignored and all proper aids granted. From the foregoing we would strongly advocate that aids to navigation required in the future development of the commerce of the Northwest be not hedged around with such ambiguous terms as "indispensable" "necessary" or "desirable." Rather let the best efforts of all those interested in the safe navigation of the lakes be turned towards showing the desirableness and efficiency of aids petitioned for, and succeed or fail before a Congressional committee, or departmental rulings, on the square issue of the rights that national transportation and commerce are entitled to at the hands of the country at large.

TOWING AND WRECKING COURTESIES.

In the light of the Washington treaty of 1842, which was to settle and define the boundaries between the United States and the British possessions of North America, it would appear that the international wrecking and towing courtesies indulged in by both the United States and Canada are hardly in conformity with the expressed stipulations. In article 27 of the treaty of 1842 is a provision as follows: "It is further agreed that the channels of the river St. Lawrence, on both sides of the Long Sault islands, and of Barnhart island, the channels in the river Detroit on both sides of the island Bois Blanc and between that island and both the American and the Canadian shores, and all the several passages and channels between the various islands lying near the junction of the river St. Clair with the lake of that name, shall be equally free and open to the ships, vessels and boats of both parties." Therefore, each country possesses the right of navigating the lakes and the unbroken rivers, where undivided by islands from shore to shore, but, where the water boundary is divided by islands which might belong to the one or the other party, it was open to the sovereignty that owned the islands prior to the treaty of 1842 to exclude the other from those navigable waters, both banks of which were within its own territory. To prevent such a construction of an earlier treaty, that of 1842 contains the provision above quoted, and gives to each of the contracting parties the right to navigate every way and channel of these waters which are divided by islands. Accordingly, the United States expended money in deepening the channel between Bois Blanc and the Canadian mainland in Detroit river, though exclusively or distinctly Canadian territory, because, by this article, the right to navigate this channel is secured to them. No more could Congress, by the expenditure of money on the St. Clair flats, take from the Dominion the right to navigate that portion of the waterway which has been so deepened and improved.

From the foregoing there would seem to be ample grounds for doubting the legality of the mutual rendering of the wrecking and towing courtesies in relation to the treaty rights of navigation extending from shore to shore, and this 1842 treaty would no doubt stand a close scrutiny, as, if the ordinary construction may be placed

on the clauses, there can no longer be any embargo placed on vessels desiring to render assistance to others in distress wherever they may be stranded or disabled on either shore of the lakes.

SAILORS' HOMES AT LAKE PORTS.

There is an excellent opportunity at the present time for energetic, trustworthy persons, or one of the several Seamen's Associations, to start a sailors' home at any of the principal lake cities or shipping points.

One of the many advantages of such an institution, properly conducted, would be in affording a convenience for masters in securing good crews; also in providing a place for seamen to board, instead of as now, being obliged to locate, in many instances, at cheap saloons and other undesirable boarding places.

In this connection it is a congratulatory feature to point to the good work done by the trustees of the Scandinavian Sailors' Temperance Home, in Brooklyn, who show in their annual report the necessity for building a new home, and call upon all persons interested in shipping, yachting and the life of sailors to lend a helping hand. Since this institution was founded 10,270 sailors have resided there and many thousands of dollars have been saved and forwarded to their families. Hundreds of sick sailors have also received aid in the form of board and clothing.

Realizing that in time larger and more commodious quarters would become necessary, the trustees set aside a building fund, which has increased rapidly by subscriptions, until it now amounts to nearly $2,500. The trustees say that $12,000 is needed for the purchase of a building site, and that when they have secured this amount they can borrow enough more to erect the new home.

What has been accomplished in this direction at Brooklyn, N. Y., could without doubt be duplicated at Buffalo, Cleveland, Detroit or Chicago, and the character of the home be such as to endorse the standing of the seamen boarding there. In well advised hands these homes would do more to raise the status of lake seamen than any other known agency, and it is to be hoped that a humanitarian will come to the front and establish such elevating agencies in the near future.

MIDWINTER AIDS TO NAVIGATION.

We have often launched out into a thesis regarding the best methods of keeping aids to navigation in service during mid-winter navigation, or until the last boat of the fleet between any two ports, had arrived safely at her destination; but, while strenuously advocating all prudent and necessary aids to the navigator, it is hardly equitable to advise shifting the burden of hardships from the shoulders of one class and placing it on another.

This it would seem has taken place at Oswego, N. Y., as all last week the two keepers of the beacon light-house at that Lake Ontario port were imprisoned by the ice. On Christmas day they ran up a flag of distress and a relief party was organized, headed by Captain Gowan, of the steamer Reliance, and the captain of the schooner Annandale. They started in a small boat, and after a terrible battle of three hours with the ice and waves, succeeded in landing the two light-keepers, who had so tenaciously stuck to their post, although they had been without food for three days.

The inference is now that light-keepers must stick to their stations as late as possible, but, if they happen to get caught out in the ice they should endure the consequent hardships without growling. We hope, however, that the brave fellows are none the worse for their three days of enforced abstinence from solids.

THERE does not seem to have been any improvement in the methods of construction of wharves, piers, breakwaters, etc., on the lakes within the memory of man; in fact, it would appear that we have retrograded in this respect, for there are ancient remains of stone work to be found, but everything recent seems to be on the rapidly decaying, soft wood order of construction. Surely there is room for advancement in this direction especially as we find new work now in progress, that when completed, if not before, will call for an appropriation for repairs and keep up. Visitors to the Columbian Exposition will certainly not compliment the country on the staunchness, permanent looking works or sightly appearance of the soft-wood bird cages resembling dry goods cases bolted together, invariably found at all lake ports with a degree of sameness that carries the mind along to the juvenile pastime of building block houses and forts with pine cubes. We may point with pride to the work at Sault Ste. Marie canal, and then subside, for there is hardly another boundary, pier, wharf, sea wall or breakwater on the lakes that can hold itself together for the space of five years without requiring considerable repairs. How many times will we have to rebuild already established works before a departure on a somewhat more permanent basis of construction will be inaugurated, it is difficult to say; but, we do know that the time has arrived for dispensing, to a great extent, with pile driving, sheet piling, mortising and tapping iron spikes into a soft wood construction that is innocently calculated to withstand the ravages of time, at least, until the next appropriation becomes available. Now, let an engineer with the courage of his convictions and a due regard for the science he represents, institute a departure in the building of harbor works and build something to stay, if it only progresses at the rate of fifty feet a year. What is the matter with iron piers, stone jetties and concrete breakwaters, built to meet the special local conditions relating to winds, currents and approaches to each port. Or may such material not be thought of until the forests are becoming exhausted?

No good can possibly result from the inflated war scare raised around the entire county, consequent upon the building of three small revenue cutters, or fishery protection cruisers, at Owen Sound, Ont., one of which, only, is destined for lake service. United States naval and military officers are also credited with perpetrating the burlesque, but, it remained for the fancy-stricken alarmist who edits the *Army and Navy Register*, at Washington, to circulate an ignorant, biased and totally uncalled for attack on the functions of the administration, as follows: "We believe not only that Great Britain now has a disguised war fleet on the lakes, but that the British gunboats would be run into the lakes through the canals before the State Department got its hands off and allowed the War Department to cut the canals." We can hard y distinguish wherein the point is raised in the foregoing. Is it belief in a contemptible untruth? Does it intend to flatter the tactics supposed to be pursued by the British government through the Dominion officials? Or is it a back slap and warning combined to the United States navy, military and executive departments? It is certain that there are no disguised war vessels on the lakes, and it is also a fact that no British gunboats would be allowed to enter Lake Ontario under the present phase of the 1817 treaty. It is equally positive that this war scare business is a complete humbug, whether got up to influence Congressional appropriations, or for any other sinister purpose, it is a fraud of the first water.

IT would seem that there is a wide divergence of pinion regarding the effi ciency of the work done by the fish commissioners on the waters of the Great Lakes. A practical fisherman, who is also an extensive dealer, avers that a large proportion of the spawn, generated, as it is, in the warm water of the hatchery and deposited in the cold waters of the lake, die outright, and the much-vaunted talk of stocking the lakes is simply so much buncombe, and the methods used are abortive. If such is the case, this expensive commission should be turned down, and a close season enforced to protect the fisheries during the natural spawning time. Artificial propagation may not have arrived at that stage of success for which it has received credit, and it is possible that mutual restrictive measures between Canada and the United States would be found of much greater value to the industry than the indiscriminate dumping of forced spawn

LAKE seamen need not limit their aspirations in this age of moral, social and political advancement, for, lo and behold, the sockless Jerry of Kansas, not content with a second term in the House of Representatives, now announces his intention of becoming a candidate for United States Senator. Nothing succeeds like success, and, from "padding the hoof" around the decks of an old lake schooner, to the United States Senate, seems but a couple of seasons work for the redoubtable Captain Jerry Simpson, who is a ci-devant wind-jammer pusher of the lakes. The Hon. Jerry did us a good turn in the House last week by speaking in favor of the erection of a house for the light-keeper at Ludington, Mich., and we trust that he will put in a good many other good spokes in due season.

THE ship canal conference to meet at Washington January 12th has in vi w the survey and final adoption of a route for a ship canal or a deep water channel through United States territory to tide-water. The Hon. George H. Ely, than whom no man is better qualified, has been selected by the Cleveland Board of Trade to represent their city, and an influential delegation in hearty simpathy with the movement will no doubt assemble at Washington to initiate a movement which will certainly be accomplished in the course of the next decade. Mr. S. A. Thompson, secretary of the Duluth Chamber of Commerce, has been the moving spirit in the calling together of the convention, and THE RECORD hopes that the most signal success may crown his laudable efforts.

THE thanks of THE RECORD are due to Congressmen Vincent A. Taylor, Tom. L. Johnson and the representative firm of Conger & Conger, Washington attorneys-at-law, for courtesies received at their hands during the week.

THE annual winter mooring supplement issued with THE MARINE RECORD at the close of each season, has been delayed this week owing to our not receiving the corrected proof of a port list in time for press. A copy of the supplement, showing the ports at which all lake vessels exceeding one hundred tons are wintering, will be mailed to each subscriber of THE RECORD with the issue of January 5.

FIRE BOAT EFFICIENCY.

From the copy of a letter received from President Codd, the efficiency of a new fire boat built for the municipality of Baltimore, Md., is clearly demonstrated. The boats now being planned and built for lake ports should be kept to the same high stage of equipment. The letter spoken of is as follows:

BALTIMORE, MD., December 15th, 1892.

Wm. Cowles, Esq., President Cowles Engineering Co., Brooklyn, N. Y.

Dear sir: Yours of the 14th received. The fire boat Cataract has not been out of commission over twelve days since she was put in commission (about two years ago). She behaved splendidly at cotton fire, running her pumps since Tuesday morning (December 13th) and was running when I passed the fire one hour ago, and presume she will be there the balance of the week, as cotton will burn, water or no water. It is a sight to behold cotton bales all over the streets in neighborhood of press, and the wharves in immediate vicinity of fire filled with burning and half burnt bales. Our papers here do not give more than a passing notice of fire boat's work, but our citizens have nothing to say but words of praise. The warehouses where cotton press was located and cotton stored had thick walls—some say 18 inches, but from what I could see, judged they were 23 inches. As all the shutters and doors were of iron, she absolutely knocked a hole through the solid masonry, some five or six feet wide by ten or twelve feet deep. How is that for force? Our papers noticed it by remarking that the execution of the boat was splendid and then noted the achievement referred to above.

Yours truly, (Signed) E. J. CODD CO.
E. J. CODD, Pres't.

The above refers to a half million dollar fire in Baltimore, December 13th, 1892, and is only a small sample of the work done by modern fire boats.

The Cataract's machinery and engines were constructed by the E. J. Codd Co. and her hull by Brustar Bros., both of Baltimore; her fire pumps by Thos. Manning, Jr., & Co., of Cleveland, and her boilers by the Cowles Engineering Co., of Brooklyn. She has two of the Cowles water tube boilers and she was designed and superintended in her construction by William Cowles, constructing engineer and naval architect and president of the Cowles Engineering Co.

LAKE COMMERCE.

An excerpt from the President's annual message to Congress contains the following figures showing that the tonage of the Great Lakes are nearly equal to the total foreign trade of the world renowned seaports of London and Liverpool combined.

The quotation states that:

"In our coastwise trade a great encouraging development is in progress, there having been in the last four years an increase of 16 per cent. In internal commerce the statistics show that no such period of prosperity has ever before existed. The freight carried in the coastwise trade of the Great Lakes in 1890 aggregated 28,295,959 tons. The total vessel tonnage passing through the Detroit river during that year was 21,684,000 tons. The vessel tonnage entered and classed in the foreign trade of London during 1890 amounted to 13,480,767 tons, and of Liverpool 10,941,800 tons, a total for these two great shipping ports of 24,422,568 tons, only slightly in excess of the vessel tonnage passing through the Detroit river. And it should be said that the season for the Detroit river was but 228 days, while of course, in London and Liverpool the season was for the entire year. The vessel tonnage passing through the St. Mary's Canal for the fiscal year 1892 amounted to 9,828,874 tons, and the freight tonnage of the Detroit river is estimated for that year at 25,000,000 tons, against 23,209,619 tons in 1891."

IN mailing out their season compliments to the trade the Lunkenheimer Brass Manufacturing Co., Cincinnati, O., state that: "The increased demand for the Lunkenheimer brass and iron specialties, and the introduction of new products, has compelled us to double our capital to $500,000 and as soon as possible our manufacturing facilities. This will place us in position to give all orders even more prompt and satisfactory attention than heretofore. The company will, after January 1st, 1893, transact its business as the Lunkenheimer Company, with officers as follows: Edmund H. Lunken, President: C. F. Lunkenheimer, Vice President and Treasurer; D. T. Williams, Secretary. A continuance of the liberal patronage heretofore bestowed is respectfully solicited.

CORRESPONDENCE.

☞We do not hold ourselves responsible in any way for the views or opinions expressed by our correspondents. It is our desire that all sides of any question affecting the interests or welfare of the lake marine should be fairly represented in THE MARINE RECORD.

OUR FOREIGN SHIPPING COMPETITION.

MISTAKES AT WASHINGTON.

CHICAGO, ILL., December 26, 1892.
451 LA SALLE AVE.,

To The Editor of The Marine Record:

If there is one subject more than another that our people should have correct information on, it is the much be-fogged "shipping question." This subject has been handled by persons in authority who should know better than to assert that the decay of our foreign trade marine has been the result of an attempt "to compete on equal terms with foreign nations," and yet these individuals never mistrust that in such statements they simply give away the fact of their want of information and reflection. The historical fact is, that our foreign trade marine has not competed on "equal terms" with the marines of foreign nations, particularly with that of Great Britain, the one that has been the foremost and most severe in beating our fleets from the sea. "Equal terms" are all that we need in any competition. "Equal terms" we have never had with British ships on the sea, even when we had the old protection of discriminating import duties, except as to the China trade. It seems, however, that we have now a commissioner of navigation who airs the fallacy above noted, and wrests history to the justification of the opposition to the restoration of the very interest that he advocates. An official of the government should at least know an absurdity when or if he perceived it in his mind, and refrain from its utterance, for if an American marine cannot compete with foreign marines on a plane of "equal terms," in the name of Republican politics, on what terms can it hope to survive? The commissioner of navigation talks about the efficacy of "protection." What can be his idea of protection? Is it something that is to secure an unequal footing—unequal terms—as applied to foreign trade shipping? If this is the case, he has mistaken not only the disease, but its cure.

No, let us have "equal terms" on the sea. This is the "protection" that the friends of American shipping ask for; the other kind is the sort we are taunted with by the enemies of our marine, and a commissioner of navigation who knows not, apparently, the difference between them is not serving his country in after-dinner speeches dispensing the east wind to his audience.

The reporter of the commissioner's speech inadvertently states that certain "facts were brought out." I will note one of the alleged, to-wit: that "the imported merchandize entered at the ports of the United States in the year 1892" was 12.3 per cent. of the total in American bottoms. On the same page of the last issue of THE MARINE RECORD may be found the statistics which, apparently, bolster up this statement. Neither are correct. The figures "12.3 per cent." are correct for the whole commerce—the imports and exports taken together—but not for the imports or exports alone. Yet the statistics given purport to be taken from the commissioner's annual report, and if this be true, or truly reported, the country has been sadly misinformed. It would seem likely that this is the case, since paragraphs have appeared in different newspapers crediting to the President the statement in his message to the same effect, that 12.3 per cent. is the figure of American carriage in the "import" trade.

In my book on "American Marine," soon to be published, the correct percentage of American ship carriage in the foreign trade is given for 1892 as follows:

PROPORTION OF AMERICAN CARRIAGE IN FOREIGN TRADE.

Imports	17.66 per cent.
Exports	8.11 per cent.
Imports and exports, both	12.3 per cent.

These figures are from the data of the Bureau of Statistics. The reports of that bureau give only the proportion of carriage for the whole commerce, inward and outward, taken together. Years ago the writer found that a rational study of the carriage of our marine in the foreign trade required a separation of the import from the export business. For a century past great variations have existed in their relative extent. They are now wider apart than for thirty years past, and, relatively, the widest ever known. It shows how little attention is given by our public men and officials, from President down, to the really great adversity of our national existence, that the percentage of carriage of our whole commerce could be taken for the percentage of "imports." In our history for a hundred years past there have been only a few times when this could have been done with any degree of accuracy or propriety. What can we expect in the way of help to our stricken marine in foreign trade from the general ignorance and inattention paid to it by officials in the high places of our government? WM. W. BATES.

(The figures questioned by our correspondent were correctly reported, and as appear in a pamphlet entitled "The Shipping Interests of the United States," being a part of the annual report of the commissioner of navigation for the fiscal year ending June 30, 1892.—ED.)

FAVORABLE LEGISLATION ON AIDS TO NAVIGATION—ATTENDED TO BY THE LAKE CARRIERS' ASSOCIATION.

BUFFALO, N. Y., December 24th, 1892.

To the Editor of The Marine Record:

I notice that you have fallen into an error in your editorial on page 8 of this week's RECORD. You call upon the Lake Carriers' Association to take immediate steps to attend to the Brickner Lighthouse bill, giving as a reason that the committee on commerce has now struck out of the bill a number of items which were in the bill as originally introduced, and which you very truly say are essential aids to safe navigation. These items are all struck out because they were provided for by Congress in July last.

While I was in Washington last week, Mr. Brickner succeeded in calling up this bill for consideration in the House of Representatives. It was favorably considered in committee of the whole and reported by that committee "to the House with the recommendation that it do pass." Mr. Brickner informs me that the Speaker has promised him another day during the present session when he can call the bill up again. It seems quite probable that it will pass at this session, although Mr. Holman and other influential members have opposed and still do oppose it. Yours truly,

C. H. KEEP, Sec'y of the Lake Carriers' Ass'n.

MARITIME LAW.

SHIPPING—TRADE BETWEEN AMERICAN PORTS—FOREIGN VESSELS.

District Court S. D. California, Sept. 26, 1892.

Act March 1, 1817, § 4, (now Rev. St. § 4347) prohibits, under pain of forfeiture, the transportation of merchandise from one American port to another in foreign vessels. Act July 1866, (now Rev. St. §3110) declares that, if any merchandise "shall at any port of the United States, on the northern, northeastern or northwestern frontiers thereof," be laden on a foreign vessel and taken to a foreign port, and thence re-shipped to any other "port of the United States, on said frontiers," with intent to evade the provisions of the fourth section of the act of 1817, such merchandise shall be seized and forfeited. Held, that while it is a palpable evasion of the act of 1817 to ship goods from New York to Antwerp in a foreign vessel, and thence reship them in another foreign vessel to San Francisco, such transhipment is not within the prohibition of either act when the two are construed together. Ross, District Judge.

LARGE ADDITIONS TO AN ALREADY EXTENSIVE PLANT.

The Joseph Dixon Crucible Co., of Jersey City, manufacturers of Dixon's "American Graphite" pencils, are taking time by the forelock by putting a fifth story, 175 x75 feet, on their pencil factory. During the past summer and fall they have been unable to promptly fill their orders for Dixon's pencils, even though working their already superior facilities to their full capacity. It was therefore decided to push forward the work at once instead of waiting until spring, as intended. The new addition will be equipped with new and improved pencil machinery of their own invention. As in the great pork packing establishments of the west, where piggy starts in as straight pork and comes out hams, shoulders, bacon, sparerib, tenderloins, sausage, headcheese, pickled pigs' feet, bristle brushes, etc., so Florida cedar and American graphite will start in, and come out of Dixon's new machinery in "round" and "hexagon" shape, "regular size" or "tablet," "full length" or "pocket," for "office," "school," "carpenters'" or "artists'" use, in "satin," maroon," "ebony," "cedar" or "natural" finish, and in the thousand and one styles in which we now have our pencils served to us.

Besides this large addition to their pencil factory, the company will establish a rubber and brass plant for the manufacture of the various pencil accessories and novelties.

As it was only in 1891 when the Dixon Company put extensive additions on their crucible and black-lead works, and erected offices which for size and beauty are second to none in the state, it is very evident that prosperity claims the Dixon Company for its own, and that the company is well officered and wisely managed. In addition to this, let us say that graphite lubricates mechanical as well as literary and in every sense of the word is a helpmeet in its special work.

To obviate the structural strains and stresses which evidently result from a ship being launched from the ways, a firm of shipbuilders suggest that special tonnage be constructed in excavations similar to dry docks and under cover. There is a moment when a hull in the process of launching, or some portion of it, is usually held between wind and water as it were, or, in many cases, partly borne by a cushion of water at one end and a rigid bearing at the other, there is no telling or seeing what injury may result from this condition of bearings, and the dry dock idea, while involving a considerable item of expense, would no doubt be the kindest way to allow a hull to become waterborne, and on this account deserves a full consideration.

NOTES.

CAPT. WM. W. BATES, ex-Commissioner of Navigation, is now in the employ of the American Shipmasters' Association and assigned to special duty on the lakes, with headquarters at Chicago.

HON. JOHN M. FARQUHAR, of Buffalo, chairman of the committee on Marine and Fisheries of the House of Representatives in the Fifty-first Congress, is of the opinion that the next Congress will not pass a free ship bill, which is so much feared by all interested in American shipping.

THE American Shipmasters' Association have classed since our last issue the following vessels in the "Record of American and Foreign Shipping:" American schooners, Chas. L. Jeffrey, R. G. Whilden and Cora S. McKay; American ship Windoro, British bark H. B. Cann and Russian bark Alexander II.

THE Cowles Engineering Co., South Brooklyn, N. Y. have secured a large water frontage and will now enter into competition as shipbuilders as well as manufacturing water-tube boilers. The location is an excellent one for a shipyard and a fair share of patronage will no doubt be received by this well and favorably known company.

OUR thanks are due the Lake Steward's Mutual Benefit Association of Buffalo, N. Y., for an invitation and complimentary admission card to the first annual ball given on Monday evening, December 26th, at Concert Hall. THE MARINE RECORD will be in attendance to chronicle the success of the first annual, which even now we can vouch for as an enjoyable affair.

THE Christmas number of the *Coast Seaman's Journal*, San Francisco, is replete with appropriate technical illustrations and we think the banner issue which our esteemed contemporary has ever published. The journal is the official organ of the sailor's union of the Pacific, has a wide following, exercises a discreetly beneficial influence and its advertising columns exhibit an enviable patronage.

A WASHINGTON despatch, referring to the troubles between Colonel Wm. Ludlow, Corps of Engineers, and the Light-House Board, says: "As Secretary Foster does not care to override the Light-House Board, he has decided that he will ask Secretary Elkins to order a court of inquiry. If this court finds the charge of insubordination well founded, a court martial will naturally follow. If the charge is not sustained, the Light-House Board will swallow its report and take Colonel Ludlow back."—*Army and Navy Journal.*

THE November issue of *Cassier's Magazine*, Potter Building, New York, is an unusually brilliant number, containing, as it does, the best portrait of Thos. A. Edison that has ever appeared in any journal or magazine. This superb likeness is accompanied by an article on "The Life and Inventions of Edison," by A. and W. K. L. Dickson. The articles of special interest to readers of THE MARINE RECORD are "Points in Philosophy of the Steamship," by Prof. W. F. Durand, and Economy of Triple Expansion Engines, with five elegantly executed engravings of modern marine engines.

AT the recent annual convention of the Western Seamen's Friend Society held in Cleveland, the financial report as read by Superintendent Frankland showed a total balance in the several local treasuries of $2,906.92. There had been received during the year a total of $101,520.14, of which $98,254.42 had been disbursed. This is by no means an insignificant expenditure in the special field of western seamen's welfare and we trust that the givers of this munificence feel as well rewarded as the receivers thereof. The field is large, however, and the amount of good accomplished can only be limited by the purse strings of the society's friends.

PROPOSALS.

U. S. ENGINEER OFFICE, HICKOX Building, 185 Euclid Avenue, Cleveland, Ohio, December 12, 1892. Sealed proposals for dredging in straight channel at Sandusky Harbor, Ohio, will be received at this office until 2 o'clock p. m., standard time, of Friday, December 30, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. JARED A. SMITH, Corps of Engineers, U. S. A. 15-29.

UNITED STATES ENGINEER OFFICE, Detroit, Mich., December 13, 1892.—Sealed proposals for furnishing all labor, materials and appliances, and constructing the floors, etc., of the 800 foot lock at St. Mary's Falls Canal. Mich., will be received at this office until 2 p. m. standard time, January, 12, 1893, and then publicly opened. Specifications, blank forms, and all available information will be furnished on application to this office. O. M. POE, Colonel, Corps of Engineers, Bvt. Brig. Gen., U. S. A. 15-5